3rd July, 1964.

Dr. Carl C. Lindegren,
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Southern Illinois University,
Carbondale, Illinois,
U.S.A.

Dear Carl,

Thank you for sending me a copy of your rejected letter to Science. I really don't feel there is anything to make a fuss about. It seems to me that you have confused too separate ideas.

1. The idea that "DNA makes RNA, and RNA makes protein" is an old one. It goes back to Caspersson and Brachet, and is discussed in my review of 1958. However, we all tacitly assumed that it was ribosomal RNA which was the genetic message.

2. The great new idea was that ribosomal RNA was not the genetic message, and that "messenger RNA" was only a small fraction of the cytoplasmic RNA, and that it had base ratios rather like DNA (which ribosomal RNA is general has not).

This very important idea - and I agree with Stent that it is one of the major ideas of molecular biology - was proposed by Jacob and Monod as a deduction from certain of their experiments, both genetical and biochemical. From these they inferred the existence of m-RNA. The first clear experimental evidence that it actually existed, and that the ribosomes by themselves did not carry the genetic information,was put forward by two groups of works simultaneously: Brenner, Jacob and Meselson; and Gros, Hiatt, Gilbert, Kurland, Riseborough and Watson. This work was inspired by the ideas of Jacob and Monod. Much further work (too extensive to quote) has lead to complete acceptance of this idea.

Sydney Brenner, who concurs in the above account, says that at the AAAS meeting he was introduced as one of the discoverers of m-RNA, which is correct.

While Stent's article may not clearly outline the history of the discovery of m-RNA in detail, he is quite correct in giving the major credit for the idea to Jacob and Monod. His article, however, was mainly about the associated idea of the operator and the operon. This, as Stent made clear, has not fared quite so well. In Cambridge we feel that at the moment the subject is in a state of confusion. How it will turn out only the future can tell. I can't see any harm in Stent putting forward a revised hypothesis, even if, as I suspect, it will prove incorrect.

I don't feel there is any real need to have a committee to award priorities, since the facts are not in dispute and are clear to everyone who takes the trouble to read the actual papers. It will only need correcting if people get it wrong when they come to write the text-books.

I hope this clears up the ambiguities.

Yours sincerely,

F. H. C. Crick

cc Dr. Philip Abelson, Editor of SCIENCE.